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United States Department of the Interior

NATIONAL PARK SERVICE
Carlsbad Caverns National Park
3225 National Parks Highway
Carlsbad, NM 88220

IN REPLY REFER TO:

Y14

June 20, 2005

Regional Director
Intermountain Region
PO Box 25287
Denver, CO 80225

Dear Mr. Snyder:

Enclosed are the results of our National Environmental Policy Act (NEPA) analysis regarding Carlsbad Caverns National Park's Fire Management Plan. This analysis was in the form of an Environmental Assessment (EA) that evaluated different alternatives and provided a mechanism to incorporate public comments and concerns into our decision making process. Based on our analysis, we have produced a Finding Of No Significant Impact (FONSI) for your review and signature.

We are in the final stages of completing that actual Fire Management Plan and expect to have it completed, with regional review shortly.

Please forward any comments or concerns you may have to either myself or to Chuck Barat, Deputy Superintendent at (505) 785-3090.

Sincerely,

Chuck Barat

For John C. Benjamin
Superintendent

Enclosures

Carlsbad Caverns

National Park Service
U.S. Department of the Interior
Carlsbad Caverns National Park
3225 National Parks Hwy.
Carlsbad, NM 88220

Fire Management Plan Environmental Assessment

Finding of No Significant Impact

Carlsbad Caverns National Park, New Mexico

INTRODUCTION

Carlsbad Caverns National Park sits on the eastern end of the Guadalupe Mountains in southeastern New Mexico, approximately 20 miles southwest of Carlsbad. The area was established as a national monument in 1923, and was given national park status by Congress May 14, 1930. Its purpose is to preserve and protect cave resources, the Chihuahuan Desert ecosystem, the Capitan Reef, and associated natural and cultural resources. The 46,766-acre park contains more than 110 known caves. In 1978, Congress designated 33,125 acres (71%) of the park as wilderness.

Carlsbad Caverns National Park will implement Alternative 1 (Preferred): Full Toolbox as analyzed in the Fire Management Plan Environmental Assessment.

PURPOSE AND NEED

The purpose of the proposed action is to implement an improved fire management plan (FMP) at Carlsbad Caverns National Park that incorporates advances in fire knowledge, results of burning and monitoring programs at the park, new understanding of the ecology of park vegetation, and revisions in National Park Service (NPS) policy. An FMP guides all aspects of a park's fire program. The revision of the current FMP requires this environmental assessment (EA) to address and analyze alternatives for carrying out the fire management program. This EA was prepared in order to comply with the requirements of the National Environmental Policy Act.

Since 1968, NPS policy has allowed natural (lightning) ignitions to be managed to restore or maintain ecological conditions and processes. This practice is known as wildland fire use. The fire management program has pursued this policy at the park. There is an on-going need to refine and improve the fire program for several reasons outlined in the EA, including the need to comply with the 2001 Federal Wildland Fire Management Policy.

The Wilderness Act of 1964 requires managers of legislated wilderness to "be responsible for preserving the wilderness character of the area..." The act therefore implies that allowing the continuation of natural processes, such as naturally occurring wildland fires, is an important part of "preserving the wilderness character."

ALTERNATIVE 1 (PREFERRED): FULL TOOLBOX

Alternative 1 develops a fully integrated FMP that allows resource managers to use all available management tools to meet resource management goals and objectives. These tools include wildland fire use, prescribed fire, suppression, and a limited amount of manual fuels reductions. This alternative includes cooperation with adjoining landowners and ultimately could lead to a regional approach to landscape-level fire management.

The main components of this alternative include the following elements:

1. Fire Management Units (FMUs): There are two FMUs under this alternative, delineated primarily by whether or not wildland fire use is available for implementation. Included in FMU 1 are three small areas where wildland fire use is prohibited (full suppression required): around Whites City, at Rattlesnake Springs, and around park developments such as the visitor center, offices, and historic buildings. The remainder of the park is delineated

as FMU 2, where wildland fire use is an available tool in addition to the tools available in FMU 1. Wildland fire use will be considered for implementation when conditions are within prescription and other criteria are met.

2. Fire Program Tools: All fire program tools are available – suppression, wildland fire use, prescribed fire, and manual fuels reduction treatments. Wildland fire use will be excluded from FMU 1, while all techniques may be applied in FMU 2 under the right conditions. The NPS will suppress all unplanned human-caused fires in a manner that causes the least damage to resources, people, and property, using an appropriate management response process. Lightning-ignited fire will be permitted to burn under predetermined conditions that preclude significant threats to human life, property, facilities, cultural resources, listed species, or any other important identified resource.

3. Appropriate Management Response (AMR): AMR is the process employed when a natural fire start is being considered for wildland fire use and continued throughout the duration of the fire. The spectrum for decision-making following an ignition has broadened under the National Fire Plan (2001) doctrine of AMR. Consideration is given to resource values affected, management goals and objectives, weather, available personnel and equipment, and other NPS regional priorities. Goals and management objectives are determined in advance and stated in the park's FMP. Even when all criteria are met, however, regional fire activity and limited available personnel may result in suppression of natural ignitions within the park that are excellent candidates for wildland fire use. Under AMR, when all criteria are met, fires are allowed to burn in designated areas and monitored closely.

4. Suppression of all unplanned human-caused fires: NPS policy requires that all unplanned human starts be suppressed. Any fire that is not ignited by lightning or intentionally ignited by resource managers must be immediately suppressed.

5. Monitoring: Where staff resources are available or to meet the burn objectives, monitoring may be carried out at selected intervals after a fire to determine fire effects on particular species or habitats. Specifically, all wildland fire use will be monitored daily or more frequently to ensure compliance with the natural fire zone's prescription parameters. The park will continuously update information on fire size, location, behavior, smoke dispersal, safety conditions, and effects.

6. Minimum Impact Suppression Techniques (MIST): MIST guides the choice of tools for managing fire. Wilderness areas in particular are to be managed in ways that minimize human impacts on the resource. Agency resources advisors will be consulted prior to implementing fire management tactics. However, should life or property be in danger, the superintendent has the authority to allow mechanized control and suppression methods.

7. Manual fuels reduction: Reducing fuels and creating firebreaks around property and resources (not in wilderness) requires a degree of precision not always possible with natural or planned ignitions. Manual fuels reduction can include the use of power hand tools when appropriate, such as chainsaws for woody vegetation and dead and downed fuels, string trimmers and blowers for herbaceous vegetation. All types of mechanical and manual thinning are options for reducing brush and fuels around developments.

8. Rehabilitation measures: There may be a need for short- and long-term rehabilitation following fire. Revegetation may be required where handlines were constructed or where soil and native vegetation were disturbed or other erosion control measures to minimize resource damage and other adverse impacts. Staff will consult with specialists (archeologists, hydrologists, plant ecologists, wildlife biologists, and fire ecologists) to determine the needed treatments; then write, implement, and monitor plans to accomplish them.

9. Mitigation measures: see next section.

10. Prescribed Fire Program: Despite the drought-induced reduction in fine fuels observed in recent years, this EA presents a program of prescribed fire for each alternative to allow managers to proceed when conditions are

appropriate. Management intentionally ignites prescribed fires in specific areas under predetermined conditions identified in specific burn plans. Most prescribed burns are conducted outside the natural fire season when conditions governing fire spread are less extreme and damage to plants is reduced. Fires occurring during the rainy season are generally constrained by high fuel moisture, high relative humidities, and lower temperatures. A federally certified prescribed burn boss will supervise appropriate levels of staffing for each prescribed fire. Fire behavior and weather will be monitored during all prescribed fires. Annual reviews of prescribed burns allow for fine-tuning prescriptions and lessons learned to be incorporated into future planning.

11. Fuel Treatment Projects: Several fire treatment projects are proposed for 2006-2013 and described in the EA, including mechanical and prescribed burn treatments to be carried out in appropriate conditions and seasons.

MITIGATION

The following are expected mitigation actions, by impact topic:

- Life and Property: Educate staff and the public about fire prevention, notify the public about pending and on-going activities, take protective measures to minimize the public's exposure, prepare or update cooperative agreements for fire suppression on private lands, reduce hazard fuels manually, construct fire breaks around sites, conduct prescribed burns using natural barriers to keep line construction to a minimum and during less-severe conditions.

- Park Neighbors: Inform neighbors of pending burns, reduce fuels manually to minimize neighbors' exposure, prepare or update cooperative agreements for fire suppression on private lands, coordinate burns with adjacent and nearby land managers, suppress fire adjacent to neighbors with whom the park has no agreement, formulate prescriptions to exclude severe conditions.

- Tourism: When possible, time prescribed burns to avoid periods of high visitation, formulate prescriptions to exclude severe conditions, coordinate burns with adjacent and nearby land managers to minimize cumulative impacts in the region, publicize alternative destinations, use fires as interpretive opportunities to educate the public with respect to fire's natural role in the landscape.

- Cultural Resources: Locate and identify sites vulnerable to fire effects, manually reduce hazardous fuels, construct fire breaks around sites, use minimum impact management techniques, ensure presence of cultural resource experts during fire operations, train fire crews to recognize cultural resources and the appropriate mitigating actions before the onset of the fire season.

- Changes in Landscape-Scale Vegetation Patterns: Reduce fuels in areas of high fuel accumulation that are recognized to be above the range of natural variability, minimize future fire extent by conducting burns to maintain natural mosaic pattern, time fires to minimize intensity and duration, use recurrent prescribed fire in a fragmented landscape to mimic the natural role of fire in an intact landscape to maintain or restore historic vegetation patterns.

- Wildlife Habitat Change: Monitor wildlife habitat fire effects, where appropriate suppress and/or reduce fuels in or around unique or fire-susceptible areas, time fires to minimize intensity, use minimum impact management techniques, plan for burning to maintain a natural mosaic pattern, rehabilitate burned areas.

- Special-Status Species: Manually reduce hazard fuels, set prescriptions that protect sensitive species' habitats, ensure the presence of resource experts during fire operations, monitor after fire operations to verify and improve prescriptions. When it is determined that manual fuel reduction is needed, have a resource advisor present to flag areas to avoid trampling or placing fuels on top of or next to sensitive resources or their habitat. Fire and fuel crews may also be provided training to recognize sensitive resources, assess for treatment, and take the appropriate management response.

- Exotic Species: Survey for stand locations, conduct non-indigenous species control programs, conduct research programs, reduce fuels around areas containing target species, adjust prescriptions to avoid spread of target species, maintain vigilance about seed transport on vehicles, and educate staff and the public on the effects of the spread of non-indigenous species.

ALTERNATIVES NOT SELECTED

In addition to the Preferred Alternative (Alternative 1), the EA considered the No Action Alternative: Continue Existing Direction and Alternative 2: Limited Prescribed Fire.

No Action Alternative – Continue Existing Direction

The No Action Alternative is required under the National Environmental Policy Act (NEPA) and establishes a baseline for comparing the present management direction and environmental consequences to the action alternative. Under this alternative, current fire management activities would continue per the existing FMP (1995). Under this alternative, all fire program tools are available: suppression, wildland fire use, prescribed fire, and manual fuel reduction. This alternative uses three FMUs. The Natural Fire Zone (FMU 1) is centered within the park and allows wildland fire use due to its wilderness character and distance from park boundaries. The Conditional Suppression Zone (FMU 2) runs along most of the park boundary and is intended as a buffer to protect life and property within and beyond that boundary. Suppression is not automatic; wildland fire use may be applied to a lightning ignition if conditions are acceptable. Prescribed fire may also be used. The Full Suppression Zone (FMU 3) represents the remainder of the park and is much smaller in area than the other FMUs. FMU 3 occurs as four separate units and includes park developments, such as the visitor center, maintenance facilities and residences, as well as areas containing sensitive natural and cultural resources, and the area of the park adjacent to Whites City. All fuel treatment projects proposed for Alternative 1 would also be available for No Action.

Reason not selected: The Full Suppression Zone for protection of sensitive natural and cultural resources is not needed, because protection measures will be required for those resources in FMU 2 of the preferred alternative. The buffer of the Conditional Suppression Zone is also not needed. It is believed that equivalent results can be achieved with the appropriate management response as the "conditional suppression" FMU was intended.

Alternative 2 – Limited Prescribed Fire

In this alternative, safety and conservation of resources are the highest priorities and are accomplished through containment of fire. Fire containment is an indirect suppression tactic that utilizes existing barriers, natural or manmade, to restrict fire to a specific area. This alternative does not allow wildland fire use as a management tool. A significant amount of the park has burned in the last 20 to 35 years with either prescribed fire or wild fires so that for the five-year period this fire management plan would be in effect, this would be a reasonable alternative. At the end of the five years, it would need to be reevaluated. If changes were warranted, then a new planning process would be initiated. Suppression, prescribed fire, and mechanical fuels reduction are management options in all areas of the park. Prescribed fire may be used for the purposes of fuel reduction, research, or vegetation management. Prescribed fires would provide the best safeguard against a fire escaping park boundaries, as well as for protection of human life, property, facilities, cultural resources, threatened and endangered species, or any other important identified resource. Extensive manual thinning of fuels would be required to limit fire escape. The only opportunity for reducing fuels would be in the event of an unplanned fire start. Suppression action would be immediately initiated, and if no resources are immediately threatened, control-contain tactics would be employed to manage the fire within the park. Under this alternative, only four small fuels treatment projects would be proposed. Conservative use of prescribed fire for fuels management or research is an option, but only under conditions that limit risk of escape to the fullest extent possible. Some mechanical fuel reduction is used to protect park developments, sensitive resources, and the park boundary. Only one FMU is defined under Alternative 2 because fire management strategy would not differ for any area of the park.

Reason not selected: The lack of wildland fire use resulted in more adverse impacts over the short and long term under this alternative.

ALTERNATIVES CONSIDERED BUT ELIMINATED FROM EVALUATION

The following two alternatives were dismissed from further consideration in the EA because they did not meet the purpose and need for the project, were not feasible, resulted in substantial environmental or health and safety impacts, or did not meet the objectives for the project.

Research Prescribed Fire/Wildland Fire Use

This alternative—one that restricts the use of prescribed fire—is based on the argument that not enough is known about fire effects on the park's ecosystems. Under this alternative the park would be divided into three FMUs: a wildland fire use unity in the park's interior, a conditional suppression unit out to the park boundaries, and a full suppression unit around developments and along the eastern boundary. Wildland fire use would be permitted in the wildland fire use and conditional suppression FMUs when natural ignitions look like they could satisfy management prescriptions based on safety and resource protection needs. Prescribed fire would not be an option for fire management, except for the purposes of research.

Reason for dismissal: Limiting prescribed burning under this alternative would remove an important strategy for preventing high-severity wildland fire and the escape of such fire from the park. Substituting mechanical thinning is not feasible in all problem fuel areas, as thinning results in slash piles that need to be burned.

Full Fire Use

This alternative allows all naturally ignited fires to burn within the park; prescribed fire for fuel reduction and resource benefit, and non-fire fuel treatments around sensitive resources, developments, and the Rattlesnake Springs area. Because the preservation of life and property is the number one priority for fire management operations, this alternative protects individual features and structures with small buffer zones and otherwise permits fires to burn unless conditions were unsafe. Fires would be suppressed at the park boundary.

Reason for dismissal: Administrative considerations decrease the attractiveness of this alternative: deciding whether to fight fires burning very close to places that require protection on a case-by-case basis would be prohibitively complicated and time-consuming. In inhabited areas, there is no safety margin for sudden changes in fire conditions.

ENVIRONMENTALLY PREFERRED ALTERNATIVE

The environmentally preferred alternative is determined by applying the criteria suggested in the NEPA of 1969, which is guided by the Council on Environmental Quality (CEQ). The CEQ provides direction that "the environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in the NEPA Section 101" which states, "...it is the continuing responsibility of the Federal Government to":

- fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
- assure for all generations safe, healthful, productive, and esthetically and culturally pleasing surroundings;
- attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences;
- preserve important historic, cultural and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice;
- achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities; and
- enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

The environmentally preferable alternative is Alternative 1. While Alternative 2 is reasonable and would allow the park to meet its fire, fuels, and resource management goals and objectives, it is most effective over the five years that the proposed fire management plan is in effect and at the end of that period would need to be reassessed. If changes are needed, such as making wildland fire use a viable option for managing the park's vegetation or fuels, a new planning process would need to be initiated to allow that to occur. Both the No Action Alternative and Alternative 1 also meet the fire, fuels, and resource management goals and objectives, however they are both more viable than Alternative 2 beyond the five-year period the FMP would be in effect. The No Action Alternative and Alternative 1 would be more adaptable to changing conditions over the long term and provide a better framework for adaptive management. The No Action Alternative, however, is more limiting than Alternative 1 because of the Conditional Suppression Zone that buffers the park's boundary from its interior. This zone places constraints on the implementation of wildland fire use within this zone that may not be warranted at the time of a natural ignition. Alternative 1 removes this conditional suppression zone, thus providing greater flexibility over the No Action Alternative in implementing wildland fire use. Therefore, meeting the goals and objectives of the fire management plan within the next five years and beyond is best met by Alternative 1.

WHY THE PREFERRED ALTERNATIVE WILL NOT HAVE A SIGNIFICANT EFFECT ON THE HUMAN ENVIRONMENT

As defined in 40 Code of Federal Regulations (CFR) §1508.27, significance is determined by examining the following criteria:

Impacts that may be both beneficial and adverse:

The NPS preferred alternative will have no impacts on geological resources, depletable resource requirements and conservation potential, urban quality, socially or economically disadvantaged populations, prime and unique agricultural lands, and Indian trust resources. There will be minor, short-term adverse impacts but beneficial long-term impacts to life and property, park neighbors, tourism, cultural resources, landscape-scale vegetation patterns, and exotic species. There will be minor, short-term adverse impacts for some wildlife species, with short-term minor beneficial impact for others, but beneficial long-term impacts to wildlife habitat, including wetlands and ecologically critical areas. The preferred alternative will have short-term minor to moderate adverse impacts but long-term beneficial impacts on special-status species.

Degree of effect on public health or safety:

Alternative 1 allows out-of-season prescribed fires to minimize risk to property. The direct effects remain minor and are further decreased with mitigation measures outlined in the EA. Long-term threats to safety and property will be reduced as fuel treatment objectives are met. Alternative 1 causes the least direct impact in the long term because of a decreased threat of high-severity wildland fires as boundary areas burn. In addition, the indirect effects of Alternative 1 minimize the movement of fire into the park from outside over the long term as more of the boundary is burned. Low- to moderate-intensity wildland fire use events with mosaic burning patterns will provide firefighter safety zones. Large-scale prescribed fire will pre-treat possible wildland fire use areas and reduce risks of escaped fires in the future. Implementation of Alternative 1 will result in short-term minor adverse impacts to public safety and property. Minor long-term beneficial impacts to life and property will accrue as management objectives of fuel reduction are met.

Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas:

Impacts on historic and cultural resources are presented on page 8, along with a discussion on NHPA Section 106 consultation. No prime farmlands or wild and scenic rivers will be affected. There will be minor, short-term adverse impacts for some wildlife species, with short-term minor beneficial impact for others, but beneficial long-term impacts to wildlife habitat, including wetlands and ecologically critical areas.

Degree to which effects on the quality of the human environment are likely to be highly controversial:

The proposed action was not found to be highly controversial during public scoping or public review of the EA. Few citizen comment letters were received during either process.

Degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risks:

While wildland fire has some associated risk, the proposed action will not have effects that are highly uncertain, or of unique or unknown risk on the quality of the human environment.

Degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration:

The preferred alternative neither establishes a precedent for future actions with significant effects nor represents a decision in principle about a future consideration.

Whether the action is related to other actions with individually insignificant but cumulatively significant impacts:

As documented in the EA, the preferred alternative will not result in significant cumulative impacts when added to other past, present, or reasonably foreseeable future actions.

Degree to which the action may adversely affect districts, sites, highways, structures, or objects listed on National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources:

Human use of the Carlsbad area dates back to at least 8,000 B.C. There are some 200 archeological sites recorded for the approximately 4,000 acres of the park surveyed to date, and many more are believed to exist. Fire-cracked rock middens make up about two-thirds of the sites. The middens (also known as ring middens, midden circles, sotol pits, or mescal pits) are doughnut-shaped structures of burned rock, ash, and occupational debris. Their major use was in roasting and preparing mescal plants (agave) or sotol bulbs for food. Other known site types consist of rock shelters, cave sites, pictographs, mortar holes, and lithic scatters. Two sites, Upper Painted Grotto and Lower Painted Grotto, contain polychromatic pictographs.

The List of Classified Structures records 30 historic structures in the park. The Caverns Historic District encompasses 13 rustic stone and adobe structures that are used as maintenance, residential, utility, cave research, and administrative facilities, as well as a cultural landscape. The earliest buildings (done in Pueblo Revival style) and associated terracing are built of local bedrock limestone; later construction was of adobe in the New Mexico Territorial Revival style. The Rattlesnake Springs Historic District is managed as a cultural landscape as well. Some of the significant characteristics include irrigated fields, fruit and ornamental trees, and two CCC-era structures. The adobe ranch house and pumphouse are representative of Territorial Revival and Pueblo Revival architecture, respectively. Numerous remains of other homesteads and water-control features are found throughout the park. The Lowe Ranch has significant interpretive value from the earliest prehistoric through the historic periods; other ranch sites consist mostly of remnants of stone foundations, trash deposits, and small amounts of fencing materials. Surface remnants of past guano mining activity consist of a few rock foundations, concentrated trash dumps, and scattered metallic debris.

The Caverns Historic District and the Rattlesnake Springs Historic District are both listed on the National Register. Areas in the park with concentrations of archeological sites have been determined potentially eligible for listing as districts on the Register. Other historic structures and most archeological sites are also considered potentially eligible for listing on the National Register.

Careful timing of prescribed burns to avoid peak fire season can minimize impacts to cultural resources. Wildland fire use can reduce fuels in areas where resources can tolerate low- to moderate-intensity fires. Fuel treatment can reduce effects in particular areas. Fuels surrounding cultural resources generally determine duration and intensity of heat

exposure. Where heavy fuels are present, fire may expose previously unknown artifacts obscured by vegetation; duration of exposure will vary with vegetation recovery rate. Fuel treatment and wildland fire use will reduce intensity and duration of future effects. The potential for adverse direct impacts exists. Heat and smoke may damage some resources, but the potential for adverse impacts is expected to decrease over time with a reduction in fuel load. Long-term benefits to cultural resources accrue from the reduction in fuel loads in and around sites. Erosion can cause moderate indirect impacts to cultural resources. In addition, exposure of previously unknown sites obscured by vegetation may result in increased vandalism. Fire may help return cultural landscapes to pre-suppression era states. Minor direct and indirect adverse impacts to cultural resources can occur, with long-term benefits to cultural resources from reduction in fuel loads in and around sensitive areas throughout the park and less damage from fire suppression.

Consultation with the New Mexico State Historic Preservation Officer (SHPO) was conducted as part of this planning effort. The SHPO concurred to a Finding of No Significant Impact for the park's fire management plan based upon the submission of a letter asserting that a Memorandum of Agreement (MOA) will be submitted by September 30, 2005. The MOA will state that all planned activities identified in the FMP will be managed for a "no adverse effect" to cultural resources under Section 106 of the NHPA. The Affiliated Tribes of Carlsbad Caverns will also consult on the MOA. The MOA will also address buried cultural deposits encountered during any portion of fire management activities.

Degree to which the action may adversely affect an endangered or threatened species or its critical habitat:

Natural-season fires that avoid breeding seasons will cause the fewest negative impacts on plants and animals. However, safety considerations frequently push prescribed burns into pre- and post-fire seasons when risks increase. Fires impact plants less severely in non-drought years. Low to moderate intensity fires and mechanical fuel reduction in key areas result in minimal risk of adverse impact. Fire is part of the process for natural sites, and effects subside with each post-fire season. Increased wildland fire use for resource benefit will have minor, short-term direct effects on plants and animals intolerant of fire, but the potential for high-impact fire will subside over time with more burning. Prescribed fire and mechanical fuel reduction protect sensitive areas as refuges for animals. The indirect effect is that native species benefit from changes in vegetation structure and composition due to fire, as well as from post-fire increases in resource availability (e.g., light, nutrients, water).

The potential for adverse impacts to special-status species is minimized in the long term with mitigation measures that reduce adverse effects while allowing wildland fire use for resource benefit to occur. Increased prescribed fire and wildland fire use for resource benefit may have minor to moderate adverse impacts to species in the short term, but should provide long-term benefits.

The park worked with U.S. Fish and Wildlife Service (USFWS) throughout the preparation of the document. A biological assessment was prepared and submitted as formal consultation under the Endangered Species Act for the three federally listed species. USFWS issued a final biological opinion May 24, 2005. For Mexican spotted owl (MSO), USFWS concluded: "After reviewing the current status of the MSO, the environmental baseline for the action area, the effects of the proposed action, and the cumulative effects, it is the Service's biological opinion that the action, as proposed, is not likely to jeopardize the continued existence of the MSO. This conclusion was reached because the proposed project is expected to assist the NPS in reintroducing and managing fire in the ecosystem within the action area." For the Sneed and Lee pincushion cacti, USFWS concluded: "After reviewing the current status of the two cacti, the environmental baseline for the action area, the effects of the proposed fire management plan, and the cumulative effects, it is the Service's biological opinion that implementation of the preferred alternative, as proposed, is not likely to jeopardize the continued existence of the cacti. No critical habitat has been designated for these species, therefore, none will be affected."

Whether the action threatens a violation of federal, state, or local environmental protection law:

The preferred alternative violates no federal, state, or local environmental protection laws. New Mexico air quality regulations permits will be complied with for smoke management.

Impairment:

In addition to reviewing the list of significance criteria, the NPS determined that implementation of the preferred alternative will not constitute an impairment of resources and values at the park. This conclusion is based on a thorough analysis of the impacts described in the EA, the agency comments received, and the professional judgment of the decision-maker in accordance with the NPS's *Management Policies, 2001*. Although the plan has some negative impacts, in all cases these adverse impacts are the result of actions taken to preserve and restore other park resources and values. Overall, the plan results in benefits to park resources and values, opportunities for their enjoyment, and it does not result in their impairment. Because there will be no major impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Carlsbad Caverns National Park, (2) key to the natural or cultural integrity of the park, or (3) identified as a goal in the park's general management plan or other relevant NPS planning documents, there will be no impairment of resources or values at the park.

PUBLIC INVOLVEMENT

Public scoping for the preparation of the proposed FMP and EA included distribution of a joint newsletter with nearby Guadalupe Mountains National Park in November 2002 to solicit input on alternatives and other aspects of the planning process, plus consultation with natural and cultural resource agencies. It introduced the purpose of and need for the plan and provided a preliminary description of alternatives and issues. Four joint public scoping meetings were held in November 2002, in El Paso and Dell City, Texas, and in Queen and Carlsbad, NM. Comments were requested by December 31, 2002.

The EA was made available for public review and comment from March 4, 2005 until April 5, 2005. It was sent to 42 agencies, tribes, organizations, elected officials, and individuals. It was also placed at the visitor center, the Carlsbad Public Library (five copies), and on the NPS web site. Notice was placed in public newspapers and press releases were distributed to local media. There were four comment letters received from citizens, two of which concurred with the preferred alternative. There was one written comment by an agency: the State of New Mexico Environment Department Air Quality Bureau concurred that impacts from smoke will be short-term and "the project as proposed would not be anticipated to contribute negatively to air quality on a long-term basis."

Substantive comments to the EA centered on five topics: management support for wildland fire use, effects on the Southwestern willow flycatcher, firefighter safety, the benefits of fire, and participation of fire professionals in the planning process. These concerns resulted in no changes to the text of the environmental assessment but are addressed in errata sheets attached to this Finding of No Significant Impact (FONSI). The FONSI and errata sheets will be sent to all commentors.

CONCLUSION

The preferred alternative does not constitute an action that normally requires preparation of an environmental impact statement (EIS). The preferred alternative will not have a significant effect on the human environment. Negative environmental impacts that will occur will be negligible to moderate in intensity, and short-term and localized. There are no significant adverse impacts on public health, public safety, threatened or endangered species, historic properties either listed in or eligible for listing in the National Register of Historic Places, or other unique characteristics of the region. No highly uncertain or controversial impacts, unique or unknown risks, significant cumulative effects, or elements of precedence were identified. Implementation of the action will not violate any federal, state, or local environmental protection law.

Based on the foregoing, it has been determined that an EIS is not required for this project and thus will not be prepared.

Recommended: 06/21/05

John C. Benjamin — Date
Superintendent, Carlsbad Caverns National Park

Approved: 6/23/05

for Mike Snyder — Date
Acting Director, Intermountain Region

ERRATA

ENVIRONMENTAL ASSESSMENT

CARLSBAD CAVERNS NATIONAL PARK

FIRE MANAGEMENT PLAN

SUBSTANTIVE COMMENTS AND AGENCY RESPONSE

NPS policy (Director's Order-12: *Conservation Planning, Impact Analysis, and Decision-Making*) requires the identification and analysis of substantive comments prior to reaching a decision. As defined by the Council on Environmental Quality regulations, substantive comments are those which challenge accuracy of analysis, dispute information accuracy, suggest different viable alternatives, or provide new information that makes a change in the proposal. The topics, which are addressed below, resulted in no changes to the text of the environmental assessment.

Comment: A citizen commented that when deciding whether to allow a naturally caused fire to burn naturally, "it should be strongly biased towards allowing the fire to burn." And: "Fire management officers must have the management support to make the call…"	**Response:** Under the doctrine of Appropriate Management Response, goals and management objectives are determined in advance and stated in the park's fire management plan. Even when all criteria are met, however, regional fire activity and limited available personnel may result in suppression of natural ignitions within the park that are excellent candidates for wildland fire use.
Comment: A citizen asked: "The endangered Southwestern willow flycatcher is found in the Carlsbad Caverns National Park. Wouldn't your fire management plan endanger it further and be in violation of federal law?"	**Response:** The EA states that the Southwestern willow flycatcher "is only known as a migrant at the park, specifically in the Rattlesnake Springs areas. Because it does not nest in the park, it is unlikely to be affected by fires or fire management activities." The U.S. Fish and Wildlife Service concurred that the Southwestern willow flycatcher did not need to be addressed in the biological assessment and biological opinion for this FMP.
Comment: A citizen commented that this EA "neglects completely any discussion regarding the implications of the implicitly endorsed course of action regarding firefighter safety."	**Response:** The EA identifies as Goal #1 of the fire management plan "to protect people and property as the highest priority of every fire management activity." The accompanying objectives of this goal are stated as: a) Provide for the safety of visitors, firefighters, and staff during wildland and prescribed fire

	operations. b) Protect park developments and private property from the unacceptable effects of fire. c) Reduce fuels with prescribed fire and thinning in places where wildland fire is a threat to people and property. d) Implement programs to prevent unplanned human-caused ignitions and reduce human-caused wildland fires. e) Strive to meet health and safety standards that relate to fire, particularly for air quality and on-the-job safety. The EA also identifies Life and Property as Impact Topic #1 throughout. It explicitly states that during emergency situations, implying a wildland fire incident, protecting life and property supersedes wilderness values. This is consistent with meeting Goal #1 of the FMP. If protecting life and property supersedes protecting wilderness values under emergency conditions, it is reasonable to assume that they will also supersede the protection of other values as well, including natural and cultural resource values, and the EA, in our opinion bears this out. In Chapter IV, Impact Topic #1 is analyzed with respect to Alternative 1. The analysis revealed that both Alternative 1 and No Action Alternative provide the greatest opportunity to meet this goal, while Alternative 1 provides the greatest flexibility since cooperation with adjoining agencies and landowners was to be pursued in all manor of fire management actives including wildland fire use for resource benefit and prescribed fire. Alternative 1 also supports a program of fuels management that will seek to mitigate many of the concerns in regard to firefighter safety. In situations where unplanned wildland fire occurs, protection of a resource using firefighters will *only* be done if the incident command team determines that it can be done safely without exposing firefighters to unnecessary risk. Otherwise, in unsafe situation like a fast-moving fire, the park will require first and foremost for firefighters to be kept safe, and the fire will be allowed to burn over a resource. In the aftermath, the park, will seek to mitigate, to the degree reasonably possible, the effects of the fire. The EA is consistent with this scenario.
Comment: The same citizen commented that this EA includes "a great number of contrived and unsubstantiated statements regarding the negative effects of fire on individual resources" and lacks	**Response:** While the EA does not espouse all of myriad ecological benefits of fire, this EA does acknowledge that fire occurring on the landscape is an ongoing natural phenomenon and that all of the

discussion of the benefits of fire to resources and the ecosystem.	park's vegetation has evolved with some level of recurring fire. However, it is also well known that some species do not benefit from the direct effect of fire and have evolved some mechanism or life history strategy to persist on the landscape in spite the presence of fire. During extended fire-free periods these species may expand their populations and, when fire reoccurs, contract their populations. Because some species are federally protected, the park is mandated by law to mitigate, where reasonable, any adverse impacts that fire may have on individuals or the population, particularly management-ignited prescribed fire. This may be accomplished through fuel reduction treatments either by low-intensity prescribed fire were the adverse impacts are determined not be detectable or by excluding fire from the population altogether through mechanical fuel reduction treatments.
Comment: The same citizen commented that this EA was prepared and reviewed without including fire management professionals.	**Response:** The EA clearly states that the park's fire management officer at the time was one of the document's preparers. The document was also reviewed by the current FMO before release to the public.